

REMARKS

Claims 1-9 and 14 are pending in this application. Claim 9 has been amended and claims 15-20 have been added by the present Amendment. Amended claim 9 and new claims 15-20 do not introduce new matter.

Applicants hereby request that the Amendment dated July 20, 2004 not be entered.

PETITION FOR EXTENSION OF TIME

A response to the April 22, 2004 Office Action was due on July 22, 2004. Therefore, Applicants hereby petition to extend the time to file a response for one-month until August 22, 2004. The extension fee of \$110.00 is enclosed herewith.

SUBMISSION OF SUBSTITUTE DRAWING SHEETS

In accordance with 37 C.F.R. § 1.84, and as required by the August 2, 2004 Advisory Action, Applicants file herewith substitute drawing sheets for amended Figs. 4a-4d, 6a-6d, 7a-7d, 9, 10a-10d and 11a-11d.

STATEMENT OF THE SUBSTANCE OF THE AUGUST 9, 2004 INTERVIEW

On August 9, 2004, the undersigned called the Examiner to determine why there existed a new issue resulting from the Amendment dated July 20, 2004, which only canceled claims. The Examiner informed the undersigned that a section 112(2) indefiniteness issue would be raised because the Amendment canceled claim 9, causing claims 10-13, although withdrawn from consideration, to depend from a canceled claim. The Examiner indicated that claims 10-13 could not be in condition for allowance if the case were appealed and the Examiner's rejections were reversed. The Examiner also indicated that the denial of entry of the Amendment

was a petitionable matter.

With respect to Applicants' argument concerning the patentability of claims 1-8 over U.S. Patent No. 5,298,199 ("Hirose") made in the July 20, 2004 Amendment,¹ the Examiner indicated that, in accordance with M.P.E.P. § 2145, evidence supporting the argument may overcome the Examiner's rejections based on Hirose. Accordingly, Applicants reserve the right to submit such evidence.

REJECTIONS UNDER 35 U.S.C. § 102

Reconsideration is respectfully requested of the rejection of claims 1-3 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,298,199 ("Hirose").

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989); M.P.E.P. § 2131.

The Examiner asserts that because Fig. 2 of Hirose shows virtually zero transmission at an applied voltage, Hirose discloses an infinite contrast ratio at the first gray voltage, which is infinitely greater than 0.8 times the contrast ratio at zero volts, thereby anticipating claim 1. See April 22, 2004 Office Action at 4.

Applicants respectfully disagree with the Examiner and respectfully traverse the Examiner's rejection of claims 1-3. Claim 1 clearly requires a first gray voltage within a

¹ The argument states that even though a voltage yields a high contrast ratio for a viewing angle directly in front of the display, the contrast ratio for a side viewing angle at that voltage cannot be an infinite value. Indeed, such contrast ratio is provably a very low value that is less than 0.8 times the contrast ratio at zero volts.

voltage range that yields a contrast ratio greater than or equal to about 0.8 times the contrast ratio at zero volts for all viewing angles. Applicants respectfully submit that Hirose does not teach or suggest a first gray voltage range resulting in a contrast ratio which is greater than or equal to about 0.8 times the contrast at zero volts for all viewing angles, as recited in claim 1. Indeed, Fig. 2 does not show a voltage-transmission (V-T) curve for all viewing angles, and Hirose's discussion of viewing angles is extremely limited, failing to make any reference or suggest any relationship between viewing angles and first gray voltage.

A V-T curve for an LCD varies depending on the viewing angles. Indeed, an LCD with a V-T curve having an infinite contrast ratio for a viewing angle directly in front of the display may, for example, have a V-T curve with a very low contrast ratio for viewing angles to the side of the display. This feature is easily understood with reference to Figs. 5A-5D and the corresponding descriptions thereof at pages 12-13 of the specification.

Fig. 2 of Hirose does not show V-T curves for all viewing angles, and instead only shows the V-T curve for one viewing angle, i.e., the viewing angle directly in front of the display. Indeed, Hirose does not teach or suggest a configuration of the V-T curves for other viewing angles. Accordingly, in view of Hirose, a person of ordinary skill in the related art would not know the configuration of such V-T curves, and certainly could not, without the use of impermissible hindsight, develop a first gray voltage range, wherein the contrast ratio at the first gray voltage divided by the contrast ratio at zero volts is greater than or equal to about 0.8 for all viewing angles.

Referring to Fig. 2 of Hirose, although a voltage for virtually zero transmission is

shown, transmission for side viewing angles at the same voltage cannot be zero, but would be a higher value. In other words, even though a voltage yields a high contrast ratio for a viewing angle directly in front of the display, the contrast ratio for a side viewing angle at that voltage cannot be an infinite value. Indeed, such contrast ratio is probably a very low value that is less than 0.8 times the contrast ratio at zero volts.

Moreover, Applicants respectfully submit that Hirose contains no disclosure linking viewing angle with the first gray voltage range for yielding the claimed contrast ratio relationship. The references to viewing angle in Hirose cited by the Examiner are general characterizations about viewing angle asymmetry and do not bear any relation to or include any teaching linking first gray voltage to viewing angle. As such, the Examiner is overreaching in relying on such passages.

Therefore, in view of the Examiner's misplaced reliance on Fig. 2 and Hirose's general statements about viewing angle, Applicants respectfully submit that claim 1 and claims 2-3 dependent thereon, are not anticipated by Hirose.

Applicants respectfully submit that claim 1 is not anticipated by Hirose. For at least the reason that claims 2-3 depend from claim 1, claims 2-3 are also submitted not to be anticipated by the cited reference.

Therefore, Applicants respectfully request that the Examiner withdraw the rejection of claims 1-3 under 35 U.S.C. § 102(b).

REJECTIONS UNDER 35 U.S.C. § 103(a)

Reconsideration is respectfully requested of the rejection of claims 4-8 under 35 U.S.C. § 103(a) as being unpatentable over Hirose in view of U.S. Patent No. 6,256,082 ("Suzuki-2"). Applicants respectfully submit that claim 1 is patentable over the cited

references, and that for at least the reason that claims 4-8 depend from claim 1, claims 4-8 are also patentable over the cited references.

Applicants respectfully submit that Hirose, when taken alone or in combination with Suzuki-2, fails to teach or suggest a voltage value of a first gray representing the darkest state applied between the pixel electrode and the common electrode that is within a voltage range for yielding a quotient greater than or equal to about 0.8 for all viewing angles when a contrast ratio at the voltage value is divided by a contrast ratio when the voltage applied between the pixel electrode and the common electrode is zero, as recited in claim 1.

As stated above, Hirose does not disclose a first gray voltage range, wherein the contrast ratio at the first gray voltage divided by the contrast ratio at zero volts is greater than or equal to about 0.8 for all viewing angles. The addition of Suzuki-2 does not render the claimed feature obvious. Suzuki-2 makes no mention of voltage range for the first gray that is based on contrast ratio at every viewing angle.

Therefore, it is respectfully submitted that the cited references, when taken alone or in combination, do not disclose or suggest the voltage range and contrast ratio features, as defined in claim 1. It is respectfully submitted that it would not have been obvious to modify Hirose, in view of Suzuki-2, to develop the embodiment of the invention recited in claim 1.

Therefore, Applicants respectfully submit that the embodiment of the invention as defined in claim 1 is patentable over Hirose, in view of Suzuki-2. For at least the reason that claims 4-8 depend from claim 1, claims 4-8 are also submitted to be patentably distinct over the cited references.

In light of the above arguments, Applicants respectfully request that the Examiner withdraw the rejection of claims 4-8 under 35 U.S.C. §103(a).

Reconsideration is respectfully requested of the rejection of claims 9 and 14 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,573,695 ("Liu") in view of U.S. Patent No. 4,832,454 ("Walters"). Applicants respectfully submit that the amendment to independent claim 9 renders claim 9 and claim 14 dependent thereon patentable over the cited references.

Applicants respectfully submit that Liu, when taken alone or in combination with Walters, fails to teach or suggest the domain defining member including a longitudinal opening in the pixel electrode dividing a portion of the pixel electrode into two partitions and an aperture in the common electrode having at least one longitudinal portion dividing one of the two partitions, as recited in the amended claim 9. See, e.g., page 11, lines 1-6.

Liu does not disclose an aperture in the common electrode dividing a partition in the pixel electrode. In contrast, Liu teaches the formation of bumps and an alignment film layer over the slits. See col. 4, lines 31-35 and col. 5, lines 22-25. The addition of Walters does not render the claimed feature obvious. Walters addresses a control circuit for a liquid crystal display unit and makes no mention of the claimed structure.

Therefore, it is respectfully submitted that the cited references, when taken alone or in combination, do not disclose or suggest an aperture in the common electrode having at least one longitudinal portion dividing one of the two partitions formed in the pixel electrode, as recited in amended claim 9. It is respectfully submitted that it would not have been obvious to modify Liu, in view of Walters, to develop the embodiment of

the invention recited in claim 9.

Therefore, Applicants respectfully submit that the embodiment of the invention as defined in amended claim 9 is patentable over Liu, in view of Walters. For at least the reason that claim 14 depends from claim 9, claim 14 is also submitted to be patentably distinct over the cited references.

NEW CLAIMS 15-20

Applicants respectfully submit that the Examiner consider new claims 15-20 and that new claims 15-20 are patentable over the cited references and in condition for allowance.

An early and favorable consideration is earnestly solicited. If the Examiner has any further questions or comments, it is suggested that he telephone Applicants' Attorney to reach a prompt disposition of this application.

Respectfully submitted,



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